

From: [Lawyer, Dennis](#)
To: gary.shelton@smithsdetection.com
Subject: Smiths Detection Inc., Request for Additional Information Concerning Application for a License Amendment, Control 586495
Date: Friday, May 08, 2015 7:44:00 AM

Dear Mr. Gary Shelton,

This is in reference to your letter dated March 19, 2015, requesting for amendment to Nuclear Regulatory Commission License No. 06-31431-01, Docket No. 03038416. In order to continue our review, we need the following additional information:

1. You have requested for termination of the license and release of the site. Please complete a [NRC Form 314](#) for the termination action. Completing this form will provide additional information needed for termination of the site. Please ensure a senior manager signs the form, requesting the termination of the license.
2. As stated in NUREG-1757, Volume 1, please provide the last leak test of the sealed sources possessed at the facility. If you do not have leak tests for all of the sealed sources, please provide the leak tests that you have and a statement that no source has ever leaked at the facility.
3. You have submitted a final status survey for the facility. Random beta measurements were taken along with 100% scans. The MDC for the static reading are based on measurement of nickel 63. The survey does not correlate the measurements of the beta readings with the MDC for the other isotope of concern, sodium 22. Please determine the efficiency of the detector and the MDC for sodium 22 or perform surveys using appropriate instruments that demonstrate the derived concentration guidance level for sodium 22 was not exceeded. The survey states a second detector was chosen for data collection of Na-22, but it did not appear that the data was presented for the direct measurement points.
4. In the final status survey, 45 direct measurement points are shown. It did not appear to be stated which measurement points were based on random points as specified in the survey plan and which were judgmental. Please specify the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) survey points the areas of survey units.
5. The data sheets display dose rate values. The final survey plan does not describe the procedure of how the measurement is taken. Also there appears to be inconsistency in that one map appears to be correlated to the direct survey points, another correlates to beta and gamma scan locations, and the last one has one more point result than the location of wipe tests. Please describe the correct procedure for this survey data and submit corrected data.
6. The gamma scan survey states that all accessible floors, benchtops, and work surfaces were scanned. The value for scan MDC (meter six) was given as 8066 dpm/100 cm². However, the calculation was based on a 2 pi efficiency of 26%, a scan time of 0.5 seconds and a source efficiency of 100%. The gamma scan method stated that the detector is held 30 centimeters from the surface at 0.5 meters per second. The calibration data shows that the meter has an efficiency for

cesium 137 on contact of 13% (Assume 4 pi). The source geometry does not appear to enable a 100% source efficiency. Please explain how the scan MDC may be calculated in this manner or determine a corrected value.

7. The beta scans and gamma scans states that 100% of floors were scanned. This does not clearly indicate if it is of impacted areas or the entire building. Please state if the entire facility was scanned or specifically what areas were scanned. A map is recommended.
8. The final status survey does not clear state what areas were impacted and not impacted and what isotopes impacted which area. Item four of the Data Quality Objective of MARSSIM as stated in section 2.7 of your report, states that the service area and scientific laboratory was impacted. The scientific laboratory is defined in the map but the service area is not well defined by boundaries. Also, based on earlier submittals that there were some storage areas that do not appear to have been included. Please correlate the areas of use specified in the facsimile dated April 10, 2012, with the release survey maps presented in your letter. Please provide a map specifying the impacted areas, what isotopes impacted that area, and how the current map relates to the previous maps submitted.

We will continue our review upon receipt of this information. Please reply to my attention at the Region 1 Office (Address below) and refer to Mail Control No. 586495. If you have technical questions regarding this letter, please call me at (610) 337-5366.

Please note that you may not reply to this letter by return e-mail. Your reply must be in writing by letter, facsimile (610-337-5269), or signed letter attached to an email. If we do not receive a reply from you within 30 calendar days from the date of this e-mail, we will assume that you do not wish to pursue your application.

Region 1 Office Mailing Address: Licensing Assistance Team, US Nuclear Regulatory Commission Region I, 2100 Renaissance Boulevard, Suite 100, King of Prussia, PA 19406-2713.

Dennis Lawyer
Health Physicist
U.S. Nuclear Regulatory Commission
Division of Nuclear Material Safety
610-337-5366
610-337-5269 (F)